

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000318**Date Inspected:** 13-Jul-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	N/A	CWI Present:	Yes	No
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use: Yes No N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed: Yes No N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up: Yes No N/A
Approved Drawings:	Yes	No	N/A	Approved WPS: Yes No N/A
				Delayed / Cancelled: Yes No N/A

Bridge No: 34-0006**Component:** WQT & PQR HP2007144-1**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Bruce Berger was present to observe quality control functions related to welding, testing and fabrication procedures at the Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Caltrans Quality Assurance (QA) Inspector Bruce J. Berger observed welder qualification testing (WQT) by Moody International Inspectors Feng Lin Yao, Tang Li Pang, Certified Welding Inspector Zhou Daqing and He Jia Min at ZPMC today. There was one ZPMC Certified Welding Inspector, Xu Xian Ping with three assistants and one American Bridge/Fluor (ABF) employee Mr. Danny McDonald. There were a total of 28 welders which attempted welder qualification test for yesterday in the shield metal arc (SMAW), submerged arc (SAW) and the flux cored arc (FCAW) welding process. There were of total of 21 FCAW welder tests attempted with only 12 passing final visual inspection, and a total of 2 SMAW tests attempted with only 1 passing final visual inspection and a total of 5 SAW tests attempted with 2 passing final visual inspection. Moody International Certified Welding Inspector Zhou Daqing performed the final visual inspections. The Moody International, ZPMC and ABF inspectors were observed checking the welding parameters for the welders being tested. A random inspection was made of the various volt/amp gauges and temperature gauges for calibration of which all were found to be in a current state of calibration.

Caltrans Quality Assurance (QA) Inspector Bruce J. Berger witnessing ZPMC performing flux cored arc welding (FCAW) procedure qualification record (PQR) HP2007248-1, PWPS-B-T-2134 test. The welder is identified as Mr. Jin Rong, welding passes one through four. The test plate material type is identified as A709 Grade 50F-2 and thickness, 26 mm. The PQR fillet weld joint testing was performed in the overhead (4G) position. The welding

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

consumable is identified as a 1.4 mm wire, classification E71T1-1, specification AWS A5.20. Caltrans QA observed ZPMC QA Inspector, Mr. Wei Huang and two associates monitoring and supervising the testing per AWS 5.13 criteria; amperages, voltages, travel speeds, preheat and inter-pass temperatures. Also present at the test site was American Bridge/Fluor (ABF) quality control (QC) inspector, Mr. Dustin Brungardt. QA observed that the wind velocity at the ZPMC testing site appear to be in conformance with AWS D1.5, paragraph 4.14.3 requirements. Welding was completed and final visual inspection by the ZPMC QC was made and the welds accepted. A lot number of B72-061-07 was assigned to the plate.

Caltrans Quality Assurance (QA) Inspector Bruce J. Berger witnessing ZPMC performing shield metal arc welding (SMAW) procedure qualification record (PQR) HP2007144-1, PWPS-B-T-3213 test. The welder is identified as Mr. Zhu Hai Ping, welding passes one (Root) through pass six, layer 6. The test plate material type is identified as A709 Grade HPS485W and thickness, 90 mm. The PQR complete joint penetration weld joint testing was performed in the vertical up (3G) position. The welding consumable is identified as 4.0 mm electrodes, classification E9018M-H4R, specification AWS A5.5. Caltrans QA observed ZPMC QA Inspectors/Certified Welding Inspectors, Mr. Wei Huang and Xu Bing plus one associate monitoring and supervising the testing per AWS 5.13 criteria; amperages, voltages, travel speeds, preheat and inter-pass temperatures. Also present at the test site was American Bridge/Fluor (ABF) Welding Engineer, Mr. Craig Knoblock. QA observed that the wind velocity at the ZPMC testing site appear to be in conformance with AWS D1.5, paragraph 4.14.3 requirements. Welding was not completed and will be continued tomorrow.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

Mr. McDonald stated in a conversation that he and Mr. Warren Buehler were planning on returning to the welder qualification testing facility either later today or Monday to look at the welder qualification test plates which Moody International had found unacceptable. In speaking with Mr. Zhuo Daqing it was brought to this Quality Assurance Inspectors attention that the meeting which Mr. Buehler was planning on concerning the high reject rate for the welder qualifications has still not taken place.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Berger,Bruce	Quality Assurance Inspector
Reviewed By:	McClary,David	QA Reviewer
